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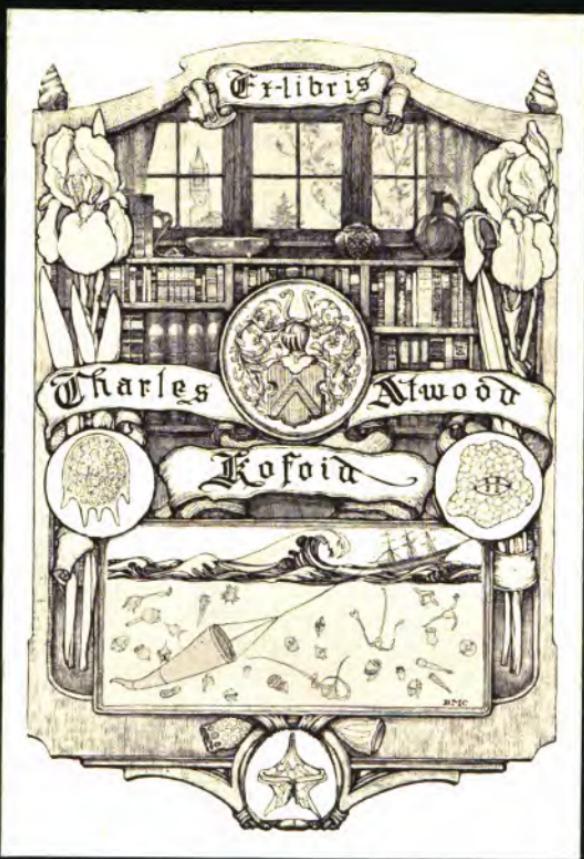
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THE OYSTER AND DREDGERS



OF WHITSTABLE

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Ready for Rough Weather.

THE
OYSTER & DREDGERS
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WHITSTABLE.

BY
ALLAN OVENDEN COLLARD.

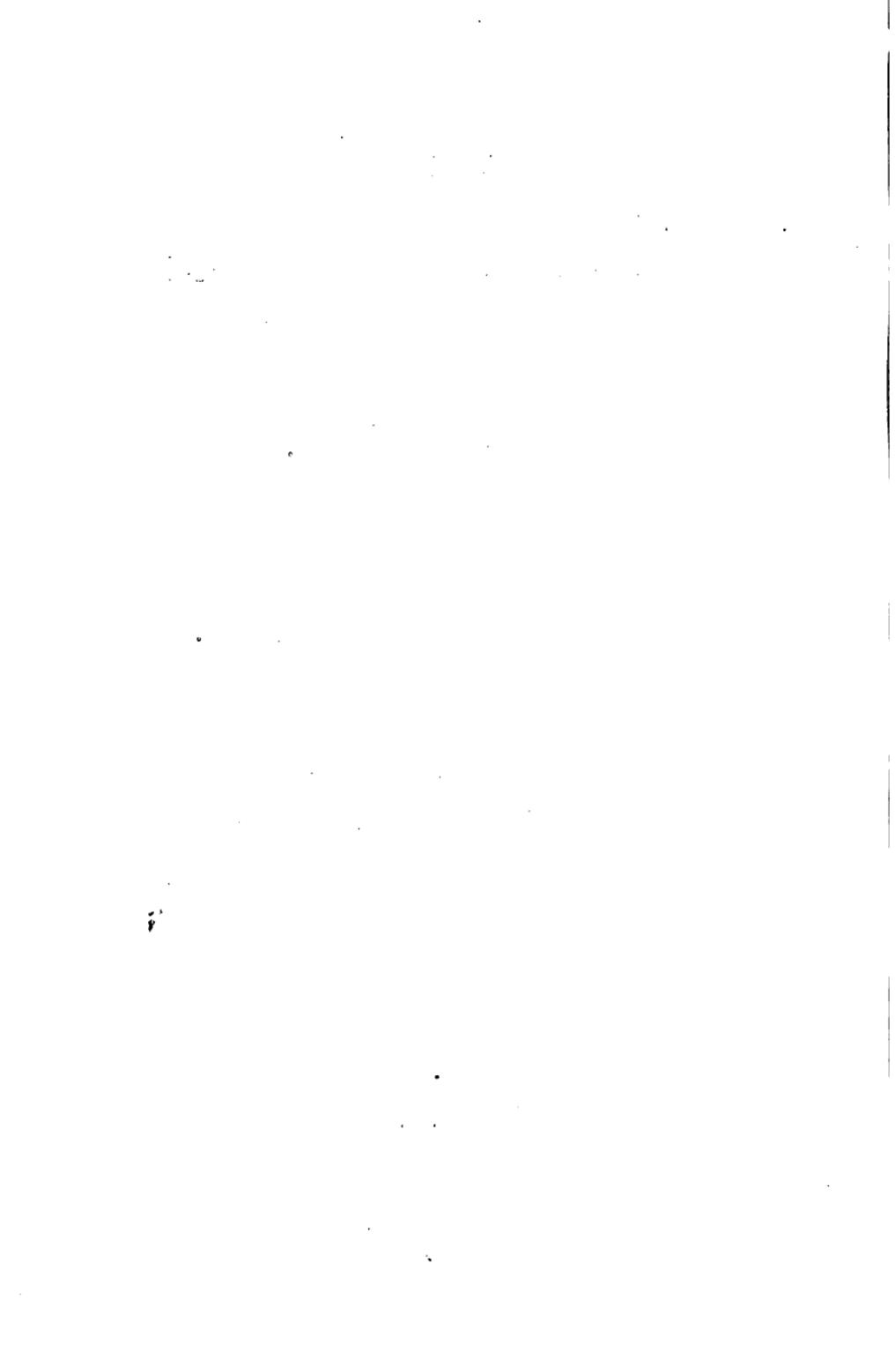
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P R E F A C E.

Very little is really known of the history and surroundings of the fishermen whose lives are spent in cultivating the Whitstable oyster.

It is true they do not have to seek their living far from home, and for that reason are not shrouded in quite so much romantic mystery as their brethren of the herring fleet, or the deep sea trawler. Yet the dredger, who works along a few miles of the coast, frequently encounters as much peril in his lively smack, as those who have to face it in deeper water and larger boats.

This small volume lays no claim to being an exhaustive account of the Whitstable industry, though it may, perhaps, add a little fresh information for those who are interested in oysters, and more especially in the "Royal Whitstable Native."

My thanks are specially due to Mr. W. H. Reeves, of Whitstable, for nearly all the photographs used as illustrations.

A. O. COLLARD,

8 Buckingham Street, Strand,

London, W.C.

July, 1902.

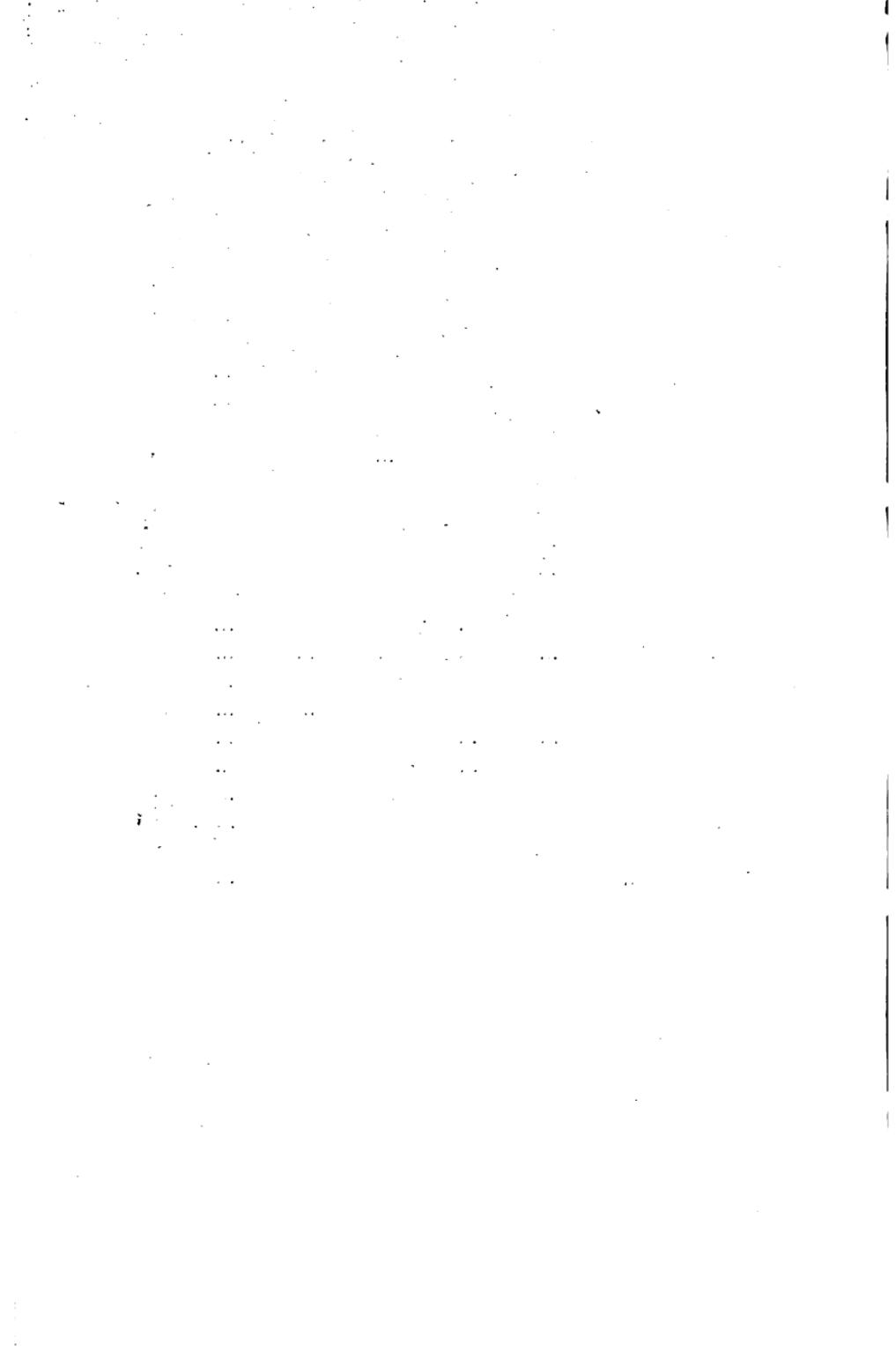
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THE OYSTER AND DREDGERS OF WHITSTABLE.

Seaside Towns. Dotted round the coast of Great Britain are many small towns, which from being mere fishing villages have gradually developed into small ports for coasting vessels, as well as summer resorts for jaded town dwellers. To all outward appearance the residents may exhibit an air of indifference towards visitors, though as a matter of fact their arrival each summer is hailed with real pleasure, for it is the cause of much bustle and profit following, probably, a very dull winter. To most visitors the invigorating sea air and water are sufficient attraction, but there are others who seize the opportunity of searching out all the interesting and historical places to be found in the neighbourhood. Indeed the resourceful residents of some seaside places seem to possess quite a genius for mapping out trips, by land or water, to remarkable places, which before, were locally considered almost unworthy of existence, and the guide books teem with advice and assistance to the traveller. It must be confessed that some of these modernised seaside towns are in themselves not particularly attractive or historical, causing a Kent coast resident once to make the surprising remark, "What can you expect with land only on one side and sea water on the other?" In spite of the guide book not being very much in evidence at Whitstable, the locality is one around which many thrilling events have



Whitstable Bay and Harbour.

occurred in English history, and visitors need never spend idle moments there if activity is preferred to ease, for intelligent enquiry will reveal no end of places of easy access, worth visiting, of which Canterbury alone deserves more than one pilgrimage, and if rurally inclined, the Kentish woods, lanes, orchards and hop grounds are always beautiful.

A first glimpse of Whitstable. The impression that a first glimpse of Whitstable leaves on the mind is, perhaps, that of a bustling, thriving, hardworking fishing town, thoroughly and legitimately absorbed in its own well-being, and not wholly ignorant of



The Whitstable Slopes.

its importance. The smallness of the older houses near the shore is also a feature, and some of the weather-boarded cottages rather remind one of little Dutch residences in Holland, though the former are not treated to quite so

much white paint. Whitstable does not possess the stereotyped front promenade, though from an artistic point of view this is no loss, for the irregular line of quaint cottages



Some old remains on the Beach.

and shipbuilders' sheds at the head of the beach, the harbour closely packed with sailing vessels, and the stocks on the shore which support vessels undergoing repair, are all most interesting and picturesque.

"Please remember the Grotter." Another point which will not escape a stranger's attention, is the absence of empty oyster shells, which might be expected in some abundance where oyster cultivation is the chief industry. The children, of course, find a use for some in the construction of grottoes, which they illuminate at night with a piece of candle, generally on the first of August. Probably few people remember the origin of the



“Please Remember the Grotter.”

old street petition, "Please remember the grotto!" The children who give utterance to it do so without much reference to its appropriate day, which should really be the Festival of St. James, on the 25th July. The legend runs that when the remains of that holy man were being brought from Palestine to Spain, of which country he was the patron saint, a knight and his horse fell overboard. The knight was saved without his horse, and, on being rescued, the knight's clothes were covered with clinging oysters. This miracle, associated with the presence of the body of the saint, was the origin of the oyster grotto. However that may have been, and, although the incident did not occur in these parts, there is much that is ancient and full of an old-time interest, about the occupation of the oyster dredgers and flatsmen of Whitstable; and for the rest, there is much scope for thought in the practical details of a fishery which is, in some respects, unique, and on which modern skill and science have had so little effect. The following notes have not been put together with a view to the scientific treatment of a deeply interesting subject, on which there are already many books of zoological value. Moreover they contain references to a few things having but a remote connection with their title, though perhaps not less attractive to the general reader, especially to those who live on the east coast of Kent, and others who go there for rest and change. It may, perhaps, be fair to say that they are an attempt to describe a thoroughly English marine industry, of which so little is really known. Such notes must almost of necessity have somewhat of a mosaic effect; but even as mosaic work, viewed by a comprehensive eye, has a distinct charm, so the collection and preservation of various fragmentary notes, which otherwise might escape notice, may possibly be worth publishing.



A bit of old Whitstable.

The number of English people who have never heard of the Whitstable oyster must be very limited, though the actual enjoyment of that seductive bivalve is preserved for a comparatively few people, for lack of opportunity or some other reason. It is very rare, however, to meet anyone who does not at once seem interested when the subject is mentioned. The mysteriously attractive flavour of a good oyster and its almost inexplicable effect on the



A modern corner of Whitstable.

palate, the romantic nature of its production, cultivation, and collection, create pleasurable impressions on the mind, which a greater familiarity only serves to increase. The general public, who may only revere the "native" at a distance, and even those, and they are many, who will never sharpen or satisfy their appetites with any other oyster than the one which hails from Whitstable, possibly have but a vague knowledge of the natural history and habits of their



Isle of Sheppey and River Swale.

favourite bivalve, or of its old association with this little town, in spite of the paragraphs which appear in the daily papers annually, about the time that English oysters come into season.

No account of the Whitstable oyster, and **Whitstable.** of the hardy fishermen of Kent, whose lives are spent in cultivating that luxury, would be complete without a slight sketch of the history of this small Kentish town of about 7,000 inhabitants, which lies on the southern side of the estuary of the Thames, eastward of the Isle of Sheppey, that little spot so quaintly remembanced in "Ingoldsby Legends," and near where the waters of the Medway and the Swale flow into the North Sea. It is situate at a distance of 59 miles from London by rail, and is within the ecclesiastical jurisdiction of the diocese of Canterbury, "under the Great Church," the older inhabitants still say, and in the Deanery of Westbere. For marine purposes Whitstable is under the jurisdiction of the Port of Faversham, a somewhat obsolete arrangement.

We have the assurance of Mr. Sibert **Origin of Name.** Saunders, who probably knows more of the history of Whitstable and its special industry than any man living, that the records of the parish are very scanty. In 1876 he gathered together those he was able to discover, and from them compiled a little book which he modestly entitled "Some Account of the Church of All Saints and Parish of Whitstable." He is probably correct in deriving the word Whitstable from the old Saxon words, *witan*, meaning an assembly of wise rulers, and *staple*, a market. It recently, however, occurred to an archæological visitor to the town to suggest that the French word for oyster, *huitre*, combined with the word *staple*, might be the

origin of the name, and he urged that presumption on the ground of early communication with the people of France, who must have known it as a place at which to buy good oysters. The suggestion is certainly an ingenious one.

Among some valuable notes attached to the evidence taken on oath in the Committee of the House of Lords in



Reculver Towers. A Landmark.

1866, on certain bills promoted by the Herne Bay Fishery Company, I find the following observations:—
“The Whitstable Company are a most ancient body of

'free fishers and dredgers,' who, from father to son, have carried on the business of an oyster fishery during, it is probable, a period of at least two thousand years. It

Julius Agricola, was about A.D. 80 that Julius Agricola first exported oysters from the neighbourhood of the Reculvers to Rome, and for the ancestors of the Whitstable free dredgers Rome was, during about three centuries, their Billingsgate."

Reculvers. It might be the neighbourhood above indicated was Whitstable, being only a few miles to the westward of Reculvers, which, it will be remembered, still shows distinct evidences of the Roman occupation. Regulbium the Romans called it, and Reculver it is still called by some people, or Reculvers, in the plural, which has been adopted in recent years, in reference apparently to the twin towers of the ruined church there, now preserved as an important landmark to vessels going up and down channel. We know, however, that formerly



A vestige of the River Wantsume.

oysters were obtained in great plenty at Reculvers itself, the River Wantsume, no doubt, contributing that essential proportion of fresh water required to improve and fatten the oyster. The River Wantsume, the ancient boundary between the Isle of Thanet and this part of Kent, is now nearly dried up, though once an important water highway communicating with the River Stour by way of Richborough. The Roman Emperor, Severus Pertinax, built a castle at Reculvers, and there was a mint for the coinage of Roman money.

Romans and Oysters. Speaking of the Romans, and their known partiality for oysters at the commencement of their epicurean banquets, a writer in the *Table* once remarked—alas, without giving his authority—that “it may not be generally known that the Roman Empresses, who were not always the most virtuous and devoted of wives, frequently employed the bivalve as an agreeable method of administering poison to their lords—to say nothing of their lovers.” While not giving too much credit to this genial aspersion of the characters of a, necessarily, limited class of Roman matron, it may be quoted as a possible indication that, in those days, the oyster was occasionally employed to give the happy despatch, because it enjoyed a reputation, among emperors, as far above suspicion as it should have with us in the present day, as we shall see presently when we come to the report of an eminent analyst, though its high qualities are no longer employed to disguise such a base purpose. That the Romans themselves cultivated oysters we know from Pliny, who tells us that in the days of Lucius Crassus they were transferred from natural beds at Brindisi and bred by Sergius Orata in the Lucrine Lake at Baiae, and in his letters Pliny makes frequent allusion to oysters as an article

of diet ; and we learn elsewhere that cods-head and oyster sauce were also appreciated in those days.

When we remember what is known of the early state of Great Britain, we can scarcely be surprised that Sallust, who lived and wrote about fifty years before Christ, had a better opinion of our oysters than of our ancestors, for he said, "The poor Britons—there is some good in them after all—they produce an oyster." Whitstable may certainly claim some share in creating that good impression.



All Saint's Church, Whitstable.

The Churches of Whitstable and Seasalter. The parish church, as now seen, dates from about the beginning of the fifteenth century, and the oldest memorial in the church is a brass to the memory of Thomas Brede, dated 1440.

This church is a mile and a quarter out of the town, but



Seasalter Church, Whitstable.

curiously enough in the High Street stands the parish church of the adjoining parish of Seasalter.

In 1524, John Roper, of St. Dunstan's, Canterbury, bequeathed the sum of one hundred marcs to be spent in making "a horseway for the fisher wives and others in the highways from Whytestaple to the entry of the street of St. Dunstan, the Westgate of Canterbury." If this horseway were ever formed there seems to be no trace of it now.

Leland, Ireland, and Hasted. Both Ireland and Hasted, in their histories of Kent, include references which throw considerable light on the connection of Whitstable, not only with the oyster fishery, but also with the outside world. Leland also in the quaint language of his day records that "Whitstable in the time of Henry VII. was a great fisher towne of one paroche, belonging to Playze College, in Essex, and standeth on the se-shore. Ther about they dragg for oysters." Ireland mentions the death of David de Strabolgie, Earl of Athol, who died here in 1327, being then owner of the "Manor of Northwood, alias Whitstable."

Kent and Essex Fishermen. On the opposite side of the Thames estuary lies the coast of Essex. A certain amount of rivalry formerly existed between the fishermen of Kent and Essex, of which there is evidence in certain letters addressed, in 1598, by the Archbishop of Canterbury, the Lord High Treasurer of England, the Lord Warden of the Cinque Ports, the Lord Privy Seal, and the Lord High Admiral, to Peter Marwood and John Boys, requiring them to investigate a trespass committed by the Essex men upon the Whitstable fishery.

In this connection it may be interesting to note that in 1814 a trial took place in the Queen's Bench to decide if a Colchester fisherman was doing right or wrong in dredging up and taking brood from Chichester Harbour. The Court held that the taking could not be penal, when the object of such taking was not to destroy, but to preserve. With all respect to judicial authority, this decision appears to have been an odd one, unless, of course, they were natural uncultivated oysters, on which no one had spent any time or money.

The fact that the oyster is more prolific as a rule on the Essex coast, but improves rapidly on being transferred to fatten on the Whitstable beds, has led to much business intercourse between the fishermen of Kent and Essex. The flats of the Kentish coast being common ground, Colchester smacks are frequently seen dredging for brood there, delivering their catches at Whitstable, and retiring for rest and shelter to the Swale, where a fleet of Essex yawls at anchor is no uncommon sight. It is stated in the *Gentleman's Magazine* of 1860, *Part II.*, pp. 237—245, that at the spot where the Swale is crossed by an iron bridge from the mainland to Sheppey, Augustine baptised 10,000 converts on Christmas Day, 597 A.D. Though this statement may be founded on fact, one would like a little more information on the point of numbers baptised, and whether they took the opportunity of indulging in a few oysters. In spite of the frequent communication between Kent and Essex fishermen, the old rivalry still crops up occasionally. The crew of a Whitstable smack not long since observed an Essex boat dredging off the coast near Reculvers, and determined to play off a practical joke on their visitors. Knowing to a nicety the exact position of what is thought to be the wreck of a submerged Spanish galleon, they sailed over it, at the same

time partially hauling up their dredges and lowering them again after passing over it. The Essex men, following on what they supposed must be a profitable course, unconscious of any danger, left their dredges down, and left they were permanently, being entangled hard and fast in the wreck. The only consolation to the Essex crew was to shout out a promise to keep a treat in store for the Whitstable smack if she ever paid a visit to the opposite shore.

Hundred of Whitstable. The Hundred of Whitstable, which includes the parishes of Whitstable, Swalecliffe and Blean, is mentioned in Doomsday Book, and is there written Witenestaple, and also Witestaple. The Manor of Whitstable, though called in some ancient records the Manor of Northwood alias Whitstaple, seems to have lost its first alternative name, though there are about 250 acres in the adjoining parish of Herne, known by the name of "Northwood." The Manor, together with the Hundred and the Church of Whitstable appendant to the Manor, formed, in very early times, part of the possessions of the owners of the Barony of Chilham, being included among lands granted by William the Conqueror to Fulbert, under an arrangement for the defence of Dover Castle.

Manor of Whitstable. In the 23rd year of Queen Elizabeth, Thomas Heneage, with the royal license, alienated the Manor of Whitstable, and ten messuages in Whitstable, to Thomas Smith of Westenhanger, whose arms may be seen on the font cover in the present church. His grandson was, in 1628, created Viscount Strangford of Ireland, and in 1709 the Manor passed to Henry Roper, Lord Teynham, who had married a daughter of the grandson of the above-named Viscount Strangford.

He sold it to Sir Henry Furness, Baronet, of Waldershare. His grandson dying in 1735, under age and unmarried, the Manor became vested in his three sisters as co-heirs, and on a partition of the estates anno 9, George II., was allotted to Anne, the eldest daughter, wife of John, Viscount St. John, and thence passed to their grandson, George St. John, Lord Viscount Bolingbroke, who was Lord of the Manor in 1790.

Inrollment Books. The history of Whitstable is most closely interwoven with its fishermen, who have a

history and ancestry reaching back into the dim ages long past, of which they have just cause to be proud, though they are little given to boasting. It is not surprising that we can trace some of the family names such as Reeves, Kemp, and Ougham (pronounced Okum in Whitstable, and Uffum in some other parts of Kent), back for centuries in the Inrollment Books preserved by the present Whitstable Oyster Fishery Company. We now come to a period when an opportunity occurred for them to grasp more firmly than ever their long-established rights.



The Trade Mark. The Present Seal. The Old Seal.

Marine part of Manor. In 1792 that portion of the Manor covered by the sea, and over which the Company of Dredgers had, from time immemorial, under licence from the Lord of the Manor, the exclusive right

of dredging and fishing, was separated from the dry portion. The marine portion of the Manor was, in that year, sold with the royalty of fishing and oyster beds to Thomas Foord, who afterwards conveyed the same to the Company of Dredgers, who thus became the proprietors, an Act of Parliament having been obtained in 1793 by which they were incorporated under the title of "The Company of Free Fishers and Dredgers of Whitstable," with a Common Seal.



The Fleet at Anchor.

Water Court. The Act gave them power to hold a yearly Water Court by their steward and water bailiff, for the admission of Freemen, and for regulating the fishery. From that time forward for over a hundred years, the business of the company was managed by a foreman, deputy-foreman, and twelve jurymen, with a water-bailiff, all of whom were elected annually at the court held in July. At the same court the treasurer, auditor, and salesmen were appointed.

**Free Dredgers
and
Apprentices.**

This Water Court, previous to their incorporation, was held by the Lord of the Manor, and in those days the sons of strangers were admitted as Free Dredgers, after an apprenticeship of seven years. For some years after the formation of the company the eldest son of every freeman of the company was admitted to membership at the age of sixteen, while the younger sons, after serving an apprenticeship of seven years, received their freedom at twenty-one. Many inconveniences arising from this rule, not the least being the rapid growth in the number of freemen, caused the rescindment of it, and in 1881 it was arranged that only the eldest sons of freemen were to be enrolled for membership at the age of twenty-one. As only the services of a certain number of the freemen were required to work the fishery, a class of non-working members rapidly increased in numbers, and had to find other occupations, though they received one-third of a member's share of the profits, the additional two-thirds, which the active members received, representing the actual payment for their labours. The widows of members, who also multiplied as time went on, by a charitable rule received the same proportion as the non-working members, while sick members obtained very nearly full pay.

The Act of 1896. It is easily understood that this state of things could not go on indefinitely, and for the company to continue in a state of prosperity some grave changes had to be contemplated. Some gentlemen of position came forward in 1895, who proposed to raise sufficient capital to buy the rights of all those members willing to sell them. An Act was duly obtained in 1896 enabling the members to sell their interests

in the Company. It is understood that the promoters found difficulty in raising sufficient funds to meet the requirements and at the expiration of three months they retired from the scene, leaving the Company in possession of their Act, which they set about to utilise in the way which seemed best to them. The result was that the nominal capital of the Company, was by the Act fixed at £250,000. Each Member of the old Company was thereupon allotted twenty £10 shares, and the shares so allotted amount in value to £120,000, which they can retain or dispose of in any way they choose, and the same apportionment was made to all those sons of members who were fourteen years of age, duly enrolled on the books of the Company at the passing of the Act, upon their attaining the age of twenty-one years, and if unmarried, thus leaving about £120,000 still unallotted in the hands of the Company. Every widow who, at the time the Act was passed, enjoyed the advantages of the old charitable rule, has a life interest of seven £10 shares which reverts to the Company at her decease. The Company, by the passing of this Act, became a public one, and the public, as usual, soon got to know the value of the shares in this marine industry.

Balance Sheet, In the Balance-sheet issued under date 31st May, 1901, the value of the 1901. stock of oysters, brood, and halfware is put at £64,846, being the amount actually paid for it by the Company, and does not include the enormous value of the spat which has been deposited by nature on the Company's ground during the last four years. The Company is managed by a Board of five directors, with a secretary, who also fills the old office of treasurer, as he receives the money and pays the men—a storesman, who



Spat on Oyster Shell.

superintends the working staff in the oyster dépôt; a foreman, who controls the working of the fleet; and a water-bailiff, whose duty it is to collect the anchorage and other dues payable to the Company, and who carries as a badge of office a small blue oar. The old office of bellman is abolished, as the foreman himself communicates the orders for the day's work or "stint" by calling them out from the office steps. The members of the Company no longer take apprentices, and the supply of men is kept up from among the shareholders, and from flatsmen if the supply is short, preference being given to those flatsmen who have been shareholders, but have sold their shares.



Old Insignia. The Bell and Oar.

The Company at present employ about 120 men, though there are 300 dredgers and flatsmen engaged altogether at Whitstable in 80 smacks, each of which has a name and number.

Smuggling. Before we dwell for a while on oyster culture as it is now carried on, it may be interesting to note that the excitement of smuggling often proved attractive, and sometimes profitable, to Whitstable fishermen. Hasted remarks that "The Street (meaning



"The Street," Whitstable.

Whitstable Street, not the strip of hard ground running out to sea, known locally as the 'Street') is very populous, and the inhabitants of it thriving, consisting mostly in the fishing and oyster dredging, the coal trade, the passage hoys to and from London, and in the shops which supply the whole of them with the necessities of life, and above all the illicit trade of smuggling, though that has been within these few years much more than at present."

He also mentions that, in 1734, there were twenty-two boats engaged in the oyster fishery, but that, at the time he wrote, in 1790, there were upwards of seventy, besides six colliers and two hoyas for passengers and goods. A perusal of the *Kentish Post or Canterbury News Letter*, and other local papers published in the eighteenth century, gives a vivid impression of the prevalence of smuggling carried on by the smack owners at Whitstable, frequent allusions being made to seizures of brandy and other contraband goods, among which ostrich feathers appear to have ranked high. One export house alone, at Cherbourg, in 1768, was said at the time to be shipping 200 gallons of brandy a month, for smugglers to convey to England and Ireland. A rather peculiar lantern, with a funnel about six feet long, was used on board the smacks, which made the light visible, without radiation, at the spot where the receivers were known to be watching on shore. The contraband, once landed, was speedily distributed among the people of high and low degree, who, scrupulously honest in other respects, did not hesitate to "do" the Customs if they had the chance. Coal-carts, with false bottoms, formed one means of distribution, and a convenient one for Whitstable spirit-runners, as large quantities of coal were brought there by sea for sale inland. I have in my possession a glass Dutch demi-john, covered in basket work, which has a curious tale of its own, in that it was tied to the stern-chain of a Kentish hoy near Whitstable, which belonged to a relative of mine, in order that his skipper might be involved in trouble. The skipper, who is still alive, says he was able to clear his character, though the Revenue men took him to Canterbury to explain matters to the magistrates. A reliable tale is told of a dredger, lately deceased, who was in all innocence dredging for oysters, and had the misfortune to drag up a



The Kentish Hoy "Good Intent."

line of submerged brandy kegs, at the very time that a Revenue vessel was trying to find them. He dropped them in hot haste and sailed away, for the penalty, if his action had been observed, would have been a severe one. Brandy kegs were frequently sunk in this way until the coast was clear, and the receivers, under cover of darkness, able to recover them.

In those days English guineas fetched a rare price in France, twenty-eight shillings or their equivalent not being unusual. To satisfy this foreign demand for a sound commodity, some English sailors, belonging to a vessel sailing from Faversham, proposed to take three hundred guineas across the channel. Unfortunately for these speculators the ship was detained at Faversham under suspicion, and learning this in time, the sailors deposited their gold in a pot of tar. The vessel lay at Faversham for twelve months and was finally condemned to be

broken up and sold. Those who were "in the know" attended the sale, and again secured possession of the guineas by buying the tar-pot.

Copperas. The collection of green copperas or green vitriol used to afford occupation to a considerable number of fishermen where it was to be found on the beach, being washed out from the cliffs near Herne Bay. Six buildings specially built for the trade were used for the purpose of manufacturing from this product of iron pyrites a black dye, ink, and the green crystals of sulphate of iron employed as a tonic by doctors. A more rapid method of obtaining these products has been found by chemists, and copperas is no longer collected in any large quantity. It may not be generally known that copperas exposed to the weather is soon reduced to powder, and can then be, with great advantage, applied to improve the growth of vegetables. An experiment also showed that a slight sprinkling produced a crop of grass twice as heavy as that grown on land which had not been so treated. It is also a good weed killer.

Salt Pans. There are still traces, too, at Whitstable, of some very early salt "pans," and the memory of this mediæval industry for obtaining salt by evaporation of sea-water survives in the name of the neighbouring parish of Seasalter.

Roman Cement. At one time the flatsmen used to dredge up boulder stones, about the size of a man's head, and sell them to manufacturers of Roman cement, but the more excellent qualities of Portland cement have deprived the flatsmen of that mode of making money.

Flatsmen. No fishermen, not members of the Whitstable Oyster Fishery Company before the Act of 1896, are permitted to work on the Company's ground, but there is a large body of men called flatsmen, not being members of the Company, who obtain a comfortable living by dredging for brood, halfware and ware, and selling them to the company at a price fixed by



A Flatsman's Gear.

those purchasers. These flatsmen can, of course, only dredge over the public fishing grounds, to which the free dredgers also resort for the same purpose. Of the flatsmen it may be truly said all is fish that comes to their nets, for, at the proper seasons, they dredge also for five-fingers, mussels, whelks, and cockles, and find a ready market for all, the five-fingers and mussels being bought up by farmers for manure.



The Royal Whitstable Native Oyster.

**What is an
Oyster?**

The oyster is a mollusc or bivalve shell-fish, belonging to the genus *ostrea*, sub-class *monomya*, as it has only one adductor muscle for closing the two halves of the valve or double shell. It is a soft, cold-blooded, invertebrate animal, without any internal skeleton. The shells are composed of carbonate of lime with a small admixture of animal matter. Unlike many molluscs, it has no foot or locomotive organ, though occasional motion may be attained by rapid expulsions of water. At least a hundred different species are known to the naturalist in all parts of the world, at varying depths ; and going back to such an early period of geology as the palaeozoic, remains of the oyster are found in great variety, all of which are believed to have descended by evolution from one common ancestor, which lived in so remote an age that the mind can scarcely realise it. I have lately seen a large number of fossilized oysters found during the recent excavation for the new Staines reservoirs. At the same place were discovered several specimens of the *Nautilus*, still retaining the beautiful external pearly surface.

For the marvellous structure of the oyster there is no space in these notes, though passing reference must be made to one of its organs, the gills, which fulfil many more offices than those of the fish for instance. In the oyster they are a breathing organ. They purify its blood and keep up a circulation of water. They gather up food from the water and carry it to the mouth. They are also reproductive organs, and brood chambers, and carry out all these duties in the most wonderful way. Thanks to the painstaking investigations of Dr. Brooks and Lieutenant Winslow in America, to M. Bouchon-Brandeley in France, and to other scientists at home and abroad, we can understand things about the oyster which seem to have been a



A Native Oyster. *Ostrea Edulis.*

mystery to investigators of the origin of species. They have made it clear that the American oyster, *ostrea virginica* or *virginiana*, and the Portuguese oyster, *ostrea angulata*, are represented by the two sexes separately, but that the common oyster, *ostrea edulis*, which is the one cultivated in the British Isles, is hermaphrodite, and produces from a single oyster both female eggs and male cells, though probably at different periods.

In the common oyster that we know best, *ostrea edulis*, the eggs fall into the water-tube of the gills and lodge there, and the currents of water convey to them some of the male cells, which on contact fuse together, the male cell losing

its identity in the egg, which is thus fertilized and at once begins to develop into a new oyster, becoming what is called spawn or spat.

With the American and Portuguese kinds, the eggs are cast forth in the waters, and, unless by accident they meet the fertilizing male cells speedily, both perish. Though the embryos of these oysters are more numerous by far than



A Portuguese "Shoehorn" Oyster.

those produced by our own bivalve, their chance of being fertilized is far less. It was, by the way, for the Portuguese oyster that Mr. Frank Buckland claimed the double advantage, that after eating the oyster, you could use the shell for a shoehorn.

Opening Oysters. There is one point about the oyster that must have struck anyone who has tried for the first time to open one, and that is the enormous tenacity with which it is able to resist the human enemy's attack and remain closed, and yet so easily opens at its own sweet will. Dr. Brooks clearly explains this power by reference to the inanimate ligament wedged in between the two shells near the narrow hinged end, which acts like a piece of india-rubber. When the shells are forcibly closed by the oyster's living adductor muscle the ligament is squeezed, and expands again when it is released. The ligament is formed, like the shell itself, by an accretion from the living tissues of the oyster, and its action is not under the control of the animal. It keeps the shell open at all times, unless it is counteracted, and for this reason an oyster at rest and undisturbed, or a dead oyster, always has its shell open. This adductor muscle is made up of a bundle of contractile fibres, which run across the body between the shells, and are fastened to their inner surfaces over the dark-coloured spots which are seen on empty oyster shells.

To those who are not deeply versed in the natural history of the oyster, but are disposed to increase the knowledge of it that they already possess, I venture to recommend them to read "The Oyster," by Dr. W. K. Brooks, which he describes most truly as a popular summary of a scientific study, but on whose valuable work it is not possible to draw further here.

Oyster Spawn. The spawn is emitted from the oyster in immense quantities, like a puff of smoke, estimated variously to contain from 800,000 to some millions of organisms, of which very few indeed ever reach maturity, which, perhaps, is just as well for some of the other inhabitants of the sea.

The spawn, or spat, is at first white and apparently lifeless, turns grey and then black, at which last stage it visibly springs to life. The spat floats in the water for a few days, and, if it be not carried out to sea, nor killed by cold, nor swallowed by fish, it falls to the bottom to anchor itself by a sticky substance with which it is provided, like all bivalves that require attachment, to a shell or the side of some other hard substance, to which the general term "cultch" is applied. Thus early the oyster endeavours to secure a position in life, where it is least likely to run the risk of being smothered by sand during a rough sea, or otherwise destroyed at once, as it probably would be, if it settled on the top of its anchor shell, stone, tile, or other object. It settles, too, with its deep or left shell uppermost, the flat or right shell being next the ground to insure steadiness, as well as to enable the oyster to eject sand or grit, which it could not do so well if lying the deep shell downwards. Also, adhering by the deep shell, it is able more easily to drop off the cultch, which it is known to be able to do in springtime, when the growth takes place, as with trees and plants.

Dredgers are most careful to return all cultch to the water, and even when empty oyster shells, still adhering at the hinge, called "clocks," are dredged up, they have strict orders to "part the clocks" before throwing them overboard.

The tint of the oyster shell, like many other living things, matches the prevailing colour of its surroundings to avoid attracting attention, which was probably not the object in view of a Court dressmaker, who recently produced a costume described as made of "oyster satin pompadour brocade." If the spat falls on the mud it perishes at once, if on weed it perishes with the weed ; but

if it falls on a clean bottom of cultch, it adheres to the hard substance and there grows. Oysters are not improved by being kept in tubs of fresh water, as they are sometimes by the oyster merchant. They can be kept much better in a cool place, by being laid out, deep shell downwards, in order that the "juice," as it is called, may not run out, and they are even said to improve in substance and flavour by that means.

The Three Ages of the Oyster. The oyster, on attaining a separate existence, goes through the several stages of spat, brood, halfware and ware, or oyster, a year marking each stage. At six, or better still, seven years of age, the oyster has reached perfection for the epicure. The suitable temperature of the sea during spawning time has been found to be 62 degrees fahrenheit.

The oyster usually spawns in April or May at the age of three years, and is said to be sick until the end of July, and to be in prime condition by September. As an instance that the oyster sometimes disregards these periods it may be mentioned that one opened on the 1st November, 1900, at Herne Bay, was about to spawn.

By the Fisheries (Oyster, Crab, and Lobster) Act, 1877, a close-time for the dredging and sale of "deep sea oysters" is fixed from the 15th June to 4th August, and for all other kinds of oysters from 14th of May to 4th August, except oysters taken in the waters of a foreign state. Foreign oysters, temporarily deposited on English beds for purposes of storage only, do not come within this close-time regulation. This Act applies to England and Scotland, but not to Ireland, which, under another Act, has a close-time from 1st May to 1st September, except where the dates are varied by the inspectors of fisheries. The Whitstable Oyster



Culling Oysters.

Fishery Company voluntarily extends the close-time for natives till "Partridge Day," the 1st of September. The customary observance of a close-time for native oysters, chiefly in order that spawning may not be interfered with, has given rise to the popular impression that oysters should only be eaten in the months which have an R in their composition, though this rule does not affect foreign oysters, which can be obtained all the year round. When the "brood" stage has been reached, or at a later period, the oyster can be dredged up from the flats to which it has



A Yawl being towed out.

wandered, and be removed to other grounds better adapted for fattening. In 1896 the Company were favoured by a heavy spat of which they are now beginning to reap the advantage, and in the year 1900 again the spat was plentiful, causing an experienced diver, who descended quite recently to report on damage alleged to be done by a Norwegian barque, which dragged her anchor in a gale of wind and grounded on the beds, to remark that "it looked a regular Klondike," so plentiful were the oysters and spat he observed.

Heavy fall of Spat. There was an extraordinary fall of spat during the summer of 1901, especially on the Kentish flats, many shells and cultch being literally covered with it. The flatsmen worked several tides on a small piece of ground off Bishopstone, called Boulder Hole, which is surrounded by sandstone

rocks, and high boulder banks. It was blowing a hard east wind, and when the water had risen considerably, some deep-keeled Colchester smacks slammed in alongside the flatsmen, and worked until high tide, hauling their dredges up through twenty-four feet of water. They delivered



Dredges on the rail.

their catch to the Company's Store, amounting to ten washes a boat for one tide's work, and Whitstable people said they had never before seen so much brood delivered, stacked up as it was like a haystack.

It is difficult always to explain the reason for the uncertain presence or absence of spat. A very cold spring-time might cause injury to the spat, or prevent the oyster spawning freely, or the advent of a large quantity of five-rayed starfish, or five-fingers as the fishermen call them,



Landing Oysters.

which feed on mussels and cockles, and so sometimes leave immense quantities of clean, empty shells, ready at the moment when the spat is seeking its natural anchorage, may account for a good season. There may be many other causes unsuspected. It has been supposed that a warm summer induces oysters to spawn freely, but many warm summers pass without the desired harvest of spat. Under the impression that five-fingers were being dredged up too freely, steps were taken recently to put a stop, for a time, to that industry, but there was such an alarm raised by many flatsmen who saw their winter livelihood about to be destroyed, that the Board of Trade declined to pass the required bye-law, and yet the oyster does not seem to have suffered from anticipated harm by the continued removal of so many five-fingers. Of course the absence of a sufficient number of mature oysters to produce spawn would insure its absence, but this could hardly occur at Whitstable, where this fact is perfectly well understood. By disregarding this obvious fact, natural oyster grounds abroad have sometimes been fished out and rendered quite barren.

Among the English variety is sometimes found what the fishermen call "Button Oysters" or "Buttons," which grow smaller in circumference, it is said, as they grow older; they get stunted at the beard end, and grow inwards at the hinge. They are regarded as "sports" by some, though others ascribe the peculiarity to the breakage of the thin edges of the shells when young, causing contraction.

Some fishermen say the age of an oyster can be detected by carefully examining the external layers of the shells, to which they assert a new layer is added each year, though I must admit that I find the greatest difficulty in doing so with any accuracy in many of the shells I have examined.



Button Oysters.

Enemies of the Oyster. The oyster has many marine enemies. The sea-urchin, for instance, feeds on it. The five-finger is a deadly foe. It clutches the oyster in its long fingers, and holds on sometimes for days, till the mollusc opens, when the five-finger instantly injects what is supposed to be a stupefying liquid, followed by the creature's stomach, which shoots into the open shells and devours the oyster. The five-finger, or common star-fish, must be distinguished from the multi-rayed star-fish or sun star-fish, which is very different on close inspection and much larger, and has twelve rays usually. The Museum at Whitstable contains a perfect star-fish with eleven rays. I have heard that the sun

star-fish devours the five-finger species, though that is little consolation for the oyster. When the oyster is ill or weak, and unable to keep his shells closed, the crab secures a meal without trouble, and is even believed to sometimes craftily insert a stone to prop open the shells of the healthy oyster while he rakes out its body.

The dog-whelk possesses a file-like weapon with which it bores a hole in the oyster shell, and inserts an instrument, through which it sucks out the juiciest part of its prey.

A long-continued hard frost is almost sure to destroy a great many oysters, to avoid which, some years ago, an Essex oyster grower placed a large number of oysters in the Herne Bay swimming bath, in the hope of saving their lives, though the result was not very satisfactory.

**Oyster
beehives.**

Mr. E. F. Wheeler, of Herne Bay, has patented an ingenious arrangement made of earthenware, of the size and appear-



The Beehive Spat Collector.

ance of an old-fashioned beehive pierced with holes and filled with common oyster and scallop shells, into which spat enters freely and remains till collected. Curiously enough, chitters, the fishermen's name for young barnacles, which grow freely even on oysters themselves, do not find their way inside these patent beehives, settling on the outside only. In other parts of the world bundles of faggots, anchored about a foot off the ground, have been found successful in attracting the spat, and in France tiles coated with whitening, lime, or cement, for the easy removal of the spat, are found to be advantageous in this respect.

**Wired Fascines
in Norway.**

Two miles from Bergen, in Norway, there is an enclosed artificial oyster-breeding lake, where another method of cultivation is employed. Stout wires are stretched across the lake below water-level, and from these wires thinner wires are suspended to which birch faggots or fascines are attached about one foot from the ground. As these birch faggots do not last very long, the owner proposes to use juniper branches in future. He abandoned the use of tiles some years ago. Sometimes a raft on barrels is moored out in the lake, on which men can stand to haul up the faggots which are fastened to it. The area of this lake is about ten thousand square yards, and the sea water in it is kept up to the desired level by sluice gates. The requisite addition of fresh water comes off the land and in the form of rain, the lack of this supply lately having prevented the oysters fattening. In a good year this lake supplies about a million oysters for market. The northerly situation of Norway accounts for the spat there not being produced till the end of August and beginning of September. The oyster is the same species as that

cultivated at Whitstable, *ostrea edulis*. The beds are closed from April to October, and the depth of water over them is about twenty-five feet, with a temperature of 16° centigrade at the bottom and 24° to 25° at a level of six feet from the top. There is another bed, near Bergen, which is only supplied with sea water at high tide in rough weather, by washing over the rocks which intervene.

Wherever oyster cultivation is carried on, the great point seems to be that whatever material is used for the spat to settle on, it must be quite clean and free from slime or any impurity, to insure close and steady adhesion. Even glass does not present too smooth or slippery a surface. Indeed the oyster seems to be quite indifferent to what material it thrives on so long as it is clean, and some of the illustrations show to what strange things oysters have been found adhering. There was a reference in *The Daily Telegraph*, 27th December, 1901, to the old battleships of the Turkish Navy, and it was stated that the dock hands where the vessels are lying, occasionally enjoy a good meal of mussels and oysters taken from the bottoms of those vessels.

Fattening Oysters. In order to afford fattening for the best oysters, the soil on which they lie must be of a particular character, and the water that covers them must be neither too fresh nor too salt, but a due admixture of the two. The Whitstable fisheries have the requisite advantages of both soil and water, and the great superiority of "Royal Whitstable natives" over almost all other oysters is mainly owing to these advantages. The "native" is the most hardy, as well as the best of all oysters, in the opinion of competent judges. It has a hard, symmetrical, pearly shell, whereas many other oysters are



1. Oyster brood on full-grown oysters. 2. Shells showing films built up by oyster to exclude diseased growth. 3. Oyster anchored to two links of chains. 4. Button oyster. 5. Pipe with two brood in bowl. 6. Brood on winkle. 7. Pipe covered by Ross worm. 8. Spat on a slate. 9. Shells with spat. 10. Right and left handed whelk. 11. Crab with brood on its back. 12. Brood on broken tumbler. 13. Shell with mussels. 14. Whelk shells. 15. Brood on neck of old bottle.

said to have a rim of chalk round the inside. The "Royals" are small and specially selected from the "Natives," and hence their high excellence and price.

Fresh Water. The fresh water which contributes so much to the high quality of the Royal Whitstable oyster is neither that of the Thames nor the Medway, both of which, probably, sweep wide of these



Bringing Oysters ashore.

beds, but the two or three streams or "freshets" which flow off the marsh-lands between Whitstable and Faversham Creek, over the beds and flats. These small streams obtain some warmth from the sun in their narrow courses, and perhaps convey certain seeds of water plants and other products which make for fattening, and supplement their marine diet of infusoria and microscopic vegetables. Too much fresh water is bad for oysters, for they may become

too fat and die. The drought which prevailed in Kent, as in other parts of England in 1901, was the cause of very little fresh water coming off the land near Whitstable. To this shortage of rainfall is attributed the fact that the oysters there did not fatten properly, and failed to reach the high excellence of former years. The greatest depth of water over the Company's beds at any tide is 22 feet, and the least depth 6 feet. This is very different to the celebrated beds at Cancale in Brittany and other places, which are left high, and practically dry, at low tide, and where it is an interesting sight to watch the fishermen and women arranging and sorting the oysters, and selecting those fit for market. The bay in which these beds are situate is very large and well protected by high cliffs, but it seems odd that the raised artificial banks between the various beds should remain perfect for any length of time as they appear to do.

Careful culture of the oyster beds is of course one of the requisites for the production of first-rate oysters, and it is not improbable that it is owing to great care in cultivation that the Whitstable natives have, for years past, even surpassed in popularity the old favourite "Milton Oysters," which were formerly heard of among the cries of London, and which were fattened on beds near to the Whitstable grounds. It is literally true to say that the oyster beds at Whitstable are as carefully prepared and maintained, though always under water, as if they were flower beds on shore.

Typhoid Scare. In view of the typhoid scare which seized on the public mind, and caused for a time a great diminution in the sale of oysters, the Whitstable Oyster Fishery Company in 1895 called in the



The Company's Stores as seen from the Beach.

eminent chemist, Mr. Sidney Harvey, to conduct an exhaustive analytical and bacteriological examination of the oyster beds, grounds, and the sea water at Whitstable. He reported an entire absence of any noxious matter communicable by sewage, and of any injurious impregnations whatever. He particularly experimented with the oyster itself, to discover any injurious bacilli, but utterly failed to do so, and expressed the decided opinion that the Royal Whitstable native oyster could be safely used as an article of food. It must have been to prevent any suspicion of their oysters being unwholesome that caused an Irish firm to recently advertise them as "sanitary oysters," approved by an analyst and carefully packed in seaweed. This is a hint which might perhaps be useful to jam makers and

many purveyors of food. Sanitary jam, sanitary preserved pineapple, sanitary lobsters, and so on, might attract much custom from careful housekeepers.

The total extent of the Whitstable fisheries is somewhere about six square miles. Like other large oyster grounds, the quality varies in different parts, some parts being more fit for breeding oysters than for fattening, but a great part being better adapted for fattening. Of this total extent of oyster beds, the Whitstable Oyster Fishery Company own the pick, being about 1½ miles from north to south, and two miles from east to west, the actual laying ground being a mile square, the rest being used for moorings, marked off by fixed beacons in the shallow water, or "shallows" (pronounced shawls), as they are known locally, and by moveable anchored beacons like scaffold poles, in deep water, guarded day and night, all the year round, by



The License of Mortmain.



—MA

WHITSTABLE OY

—AND SUR



N O R T H

Spaniard

ESTUARY OF THE THAMES

T

ISLE OF SHEPPEY

HARTY

River Swale

Shelness

Graveney

Peverell Creek

Oyster Beds

Columnine

Oyster Beds

Polygate Spill

Oyster Beds

Seasalter

S.E. & C. RAILWAY

Boschet Mill

Whitstable

the Company's three watch boats. Adjoining the Company's ground to the westward is the "Pollard" oyster fishery of almost equal extent, but not always wholly under water like the Company's. The Pollard fishery was formerly held by the Company under a license of mortmain from the Dean and Chapter of Canterbury Cathedral, who are the owners. The Company gave up this fishery when times were bad, and it is now worked by a syndicate.

The Flats. Running along outside the grounds of those fisheries lies the Faversham Oyster Fishery, and still further out to sea is the Ham Oyster Fisheries. On reference to Jacob's History of Faversham it appears that a company of Free Dredgers existed there in the time of Henry II., A.D., 1154, from whom the Dutch bought large quantities of oysters.

Eastward of the Whitstable fisheries and stretching for several miles along the coast of Kent are other grounds, many parts of which, in the quality of the soil and of the water, possess, though in a less degree, some of the advantages of the Whitstable grounds. The chief advantage, however, which the Whitstable Company's beds possess over these public grounds is, that a natural bank of boulders and shingle, still called Whitstable "Street," runs out into the sea at the eastern side of the Company's ground, and, as a breakwater, gives some protection to the shallower parts, which is not enjoyed by the corresponding portions of the more easterly grounds. This "Street" is supposed to have a Roman origin, and at very low tides traces of building foundations have been seen. It is now largely covered by shingle.

Northward and eastward of Whitstable therefore is a large extent of oyster grounds or flats, probably about

thirty square miles, on which some of the spat of oysters fall, if they escape the beds.



Shifting Oysters from boat to boat.

All the true native oysters sold in England, with the exception of those obtained from the Essex coast, are obtained from these flats, and all others are known as "foreigners."

Foreign Brood Oysters. Immense quantities of oyster brood are brought from France and elsewhere, to fatten on the Whitstable beds, where the various kinds are carefully kept separate. The importation of foreigners, however, is no new thing, for the *Kentish Gazette* of 1769 (March 18 to March 22) contains the following advertisement:—"This is to acquaint all Persons that the Oyster-men's Company of Whitstable have agreed to lay out upon West Country Oysters the

sum of Six Hundred Pounds to be brought only from Shoreham, Portsmouth or Pool. Any person that chooses to go for them, may have One Pound sixteen shillings upon a Wash, but must be delivered in good condition fit to lay on the grounds, and also delivered by the In-Ground Tub upon the Shalls at Whitstable in Kent."

As an evidence of the great care then necessary to be taken to prevent poaching and injury to the beds, the following notice in the *Kentish Gazette*, dated August 19th to 23rd, 1769, affords information :—

“Manor of Whitstable and Royalty of Oyster Fishery within the said Manor. Whereas many disorderly persons have made a common Practise of Trawling, Dredging, Fishing, and anchoring their vessels on the abovesaid Oyster Grounds, belonging to the Right Honourable Frederick Lord Viscount Bolingbroke, whereby many oyster and other shell-fish have been taken and carried away, and the soil broke up and disturbed, to the great detriment of the said Oyster Grounds and Company of Freemen of the said Fishery. This is therefore to give Notice, that whoever is found Trawling, Dredging, &c. Fishing on the said Oyster Grounds, and shall refuse paying Anchorage to the Water Bailiff, according to ancient Custom of the said Manor, will be prosecuted at the utmost Rigour of the Law.”

It must be confessed that the head-
The Company's Headquarters. quarters on shore of this important company are not particularly attractive to the seeker of architectural beauty. A few years ago the old building, which may have been interesting to the antiquary, was removed, and a substantial looking plain brick



The Company's Store and Offices,



The Old Store.



Packing Room.



Lowering Oysters into Pit.



Hauling Oysters out of Pit.

building took its place, from which ten to fifteen million oysters are distributed annually to numerous customers in the United Kingdom and abroad. On the ground floor are the offices and the storehouses, in which latter part are the tanks, where oysters can be placed temporarily if not immediately required for sale. The two tanks measure 30 feet by 20 feet, and 40 feet by 20 feet, and contain an average depth of 5 feet of sea water, obtained through a pipe regularly once a day. They hold about four hundred thousand oysters, suspended in bags.



The Company's Hall.

On the upper floor is a large hall where the meetings of the Company are held.

The various measures used at Whitstable
Oyster Measures. for buying and selling brood and oysters are as follows : —

A tub contains the same quantity as the old Winchester

bushel preserved in the museum of that city, which is 21 gallons 1 quart and $\frac{1}{2}$ a pint.

A wash is a quarter of the above quantity, that is, about 5 $\frac{1}{4}$ gallons, and is the measure by which the flatsmen sell their catches to the Company. The price per wash was recently reduced from 7s. to 5s. owing to the abundance of oysters caught on the flats, but it has again been raised to 7s.

A peck	= $\frac{1}{2}$ a wash.
A nipperkin	= $\frac{1}{16}$ of a tub.
A bucket	= $\frac{1}{3}$ of a wash or $\frac{1}{12}$ of a tub.

A prickle, the measure indicated on the seal and trademark of the company, is roughly about 10 gallons or half a tub. This basket measure is made of cane.

Professor Rogers states that "Fellows of Winchester" consumed large quantities of oysters by the pottle, a measure containing two quarts still used in the sale of vegetables and fruit in some parts of England. These Fellows were members of St. Mary's College, founded at Winchester by William of Wykeham in 1387, and now one of the chief public schools of England.

A tierce, known in the wine trade, contains 42 gallons, and a tub seems to contain what the half of that size of barrel would hold. The Winchester bushel is not the only measure of those early days which is still utilised by special trades, for, I am told, that wholesale chemists supply doctors with some drugs in bottles, that hold about two quarts and $\frac{1}{8}$ th of a pint, which they call a Winchester quart. This Winchester quart bears the same relation to the ordinary quart, as the Winchester bushel does to the ordinary bushel of eight gallons instituted in 1826.

Oyster Smacks. The expression, fishing or oyster smack, may be regarded as a general description of the two classes of the decked sailing vessel



A Whitstable Yawl.

employed in the fisheries. The vessel called at Whitstable a yawl is the most common, being a clinker-built boat, with overhanging counter, of from 10 to 25 tons burden. She is cutter-rigged, having a boomed mainsail, a topsail, foresail, and jib, though by rights yawl-rig is incomplete without a mizzen-mast and sail. This is the class of vessel which the old smugglers used. The other and far less numerous class of boat is called a borley. She is chiefly distinguished from



A Borley.

the yawl by her straight-cut stern like a rowing boat, and her boomless upright mainsail, which, though enabling her to sail nearer, offers less canvas area to the wind. Her burden is about fifteen tons. These borleys are often seen on the Thames, where they are chiefly used by shrimpers.

Whether floating at anchor in the bay, drifting along in a light wind with all sails set, or bustling along in a strong breeze with furled topsails, the picture these smacks make is always full of interest, though to the stranger their movements are very puzzling.

It is a pretty sight, and one I have often enjoyed from the windows of the old home at Herne Bay, to watch a fleet of

fifty smacks under full sail, two or three miles out to sea, working up or down with the tide, the white or tan sails thrown up gracefully against a clear blue sky, to the accompaniment perhaps of distant and heavy booming of big guns at Shoeburyness.



Coming Home.

It may be interesting to note, in passing reference to this town, that Mr. Cholmondeley Pennell, a great authority on salmon and trout fishing, who was Chairman for a short time of the Herne Bay Oyster Company, before it fell on evil days, is alive and well, and has apparently outlived most of those gentlemen who were then interested in it. He says he has none but pleasant recollections of Herne Bay, and has never ceased to regret that the Company's early prosperity did not continue. The only friend in the neighbourhood at that time, whose name and personality



Dredgers becalmed.

he can recall, is young "Squire" Collard, of Eddington, whom he remembers as a good sportsman and keen follower to hounds.

The smacks always work square with the tide, for to work against the tide in anything of a wind would, as the fishermen say, "swim the dredges" right off the ground. It is obvious, as these comparatively light dredges have to work with the tide, a steamboat that cannot travel broadside on like a smack under sail is of no use, an objection which does not arise in trawling for fish, a different and heavier description of net and tackle being employed, which renders following the tide unnecessary. In America some of the fishermen do dredge from steamers, but have to use heavy dredges, and in Connecticut it is asserted that these heavy dredges improve the oyster farms rather than injure them.

We cannot be sure when the present type of fishing smack came first to be used by the free dredgers and flatsmen, and the expression smack seems to have an equally obscure origin. Little change has probably been made for at least three centuries, though no doubt decked boats gradually took the place of earlier undocked sailing craft and open rowing boats, with or without lugsails.

The open rowing boat can even now be used, for recently I had the pleasure of assisting my nephew, Edward Maynard Collard, of Herne Bay, in dredging from one off the flats. He is an enthusiast on the subject, and full of information, owing to the keen interest which he takes in all appertaining to the Whitstable oyster and its culture.



A Yawl *undersetching*.

A Dredge and Measures.



The Oyster Dredge. A dredge is the implement used, from time immemorial, for dragging the oyster from the bottom of the sea.

It is of triangular form, stoutly made of wrought iron, to which the necessary "rigging" is attached. The iron "ring" passes through a hole in the "heel" or "rest" which hooks on to the bulwark when the dredge is about to be lifted on board. The three iron bars radiating from the "keel" are called the "limbs," and the cross-tie is called the "warbin." The way in which the ends of this warbin are twisted round the two outer limbs is noticeable.

The ends of these two outer limbs are united by a flat bar with a blunt edge, called the "bit," which scrapes up the oyster, and a good deal else that comes in the way. The dredges used on the flats have a "link back" or "ground" of wire rings, made and wired together by the fishermen themselves. On the beds this wire netting would be too rough, and hide is used instead. The upper netting in both cases is made of twine. The netting is fastened on to the dredge by hide "lacings." The "catch-stick" to which the "link back" is fastened is of holly, and the two side sticks of oak.

Between the catch stick and the twine net are three rows of wire netting called the "bonnet," which take the weight and pressure when the net is filling.

Each smack works what is known as a "fleet" of five or six dredges. The two heaviest dredges drag from the bow, two of medium weight from midships, and the two lightest from the stern. In this way the dredges are kept clear of each other, the smack, of course, sailing and drifting with wind and tide. The crew consists usually of four men on



Directors at work.

the "shalls" and three on the flats, the skipper taking the stern dredges and steering. The lightest dredges are at the stern, to avoid, as far as possible, the chance of a little extra weight pulling the ship's head round. A dredge



Hauling Dredges.

weighs about eighteen to twenty-four pounds, with five pounds extra for rigging. The rope or warp is fastened to the ring by a fisherman's bend, and, to prevent the warp being chafed, the ring is bound round with canvas, which is called the "puddening." The warp is coiled on deck, with the end buoyed, and is only secured to a cleat by a short length of twine called the "stop." If the stop breaks, and the dredger cannot hold on to the warp, it goes overboard, and the buoy marks the spot where it can be picked up on the next tack by one of the hands in the smack's boat. It happens sometimes that the dredge gets caught so firmly in a rock, or perhaps a weir stump, that

it cannot be released, or the warp may snap off close to the dredge, in either case the dredge is lost. It is less expensive to leave it alone, and go on dredging, than to waste time in getting it back. Many are the lost dredges sprinkled over the flats, and at phenomenally low tides, a few are occasionally seen and recovered by longshoremen. When a dredge is hauled on deck, the dredger turns out the contents, consisting, perhaps, of some small soles, eels, the



Culling out Oysters in Store.

horrid-looking squid, crabs, cultch, and oysters, and "culls" them over, chipping oysters off the cultch with an implement called a "cultick," like a large oyster knife, and having selected everything else usually retained, he "shades" the rest through the porthole. It may be left to the etymologist to decide if the words cull, cultch, and cultick, have a common origin, as they appear to have.

Phenomenal Low Tides. In Part I., page 87, of the *Gentleman's Magazine*, of 1784, the following note occurs:— “On Saturdry morning, 3rd January, there was a lower ebb tide all along the Kentish coast than has been known for many years, and in the evening a very small flood. At Reculver, the Black Rock (as it is called) being left dry, the foundations of the ancient parish church were discovered, which had not been seen for forty years before.”

I am indebted to a friend for the following account of an exceptionally low tide, which disclosed for a short time some of the secrets of the flats:—“On the 3rd of March, 1896, owing to a heavy S.W. gale, which had blown with much force all the previous night, the tide ebbed to the lowest point that had been known within the memory of the oldest inhabitant. Only those that availed themselves of the sight can realise the varied formation of the soil, consisting at places of large sand and cement stones, rock, blue and yellow clay, among which might be seen the trunks of large trees laying as they fell, showing that land once extended far outside the present shore. At $1\frac{1}{4}$ miles from Herne Bay shore, it was perfectly dry on the Weir Rand (commonly pronounced ‘Ware Rand’), and the long rows of wooden stumps that were revealed showed the remains of ancient fishing weirs, which, probably, were those that paid tithes to the Parish of Herne centuries ago. Here and there on the stumps were dredges, lost at various times by flatsmen coming fast, and the warps breaking, perhaps, in a strong breeze.

“At Reculvers, the Black Rock dried entirely, and could be walked to from the shore, and the rocks in Beltinge Bay all dried out as far as the Stone Bank. Large quantities of

lobsters, oysters, and brood were picked up. It is said to be over sixty years since such a remarkable occurrence took place."

Weir and Weir Tithes. A letter, written by Rev. John Hunt, Curate of Herne, dated 10th August, 1621, declares the following tithe charge to be "the ancient custom beyond the memory of man." He



Graveney Weirs.

had the books of Mr. Brydges (Vicar, 1562), who had them of Mr. Johnson (1549). Item, "For titheing every deep ware (fishery), 2s.; of every landware 12d. For theyr mullet netts I have compounded (and others before me) for 3s. 4d., sometimes 5s., sometimes VI. 8d. for the year."

Fishing weirs are a source of annoyance and loss to dredgers, and are no longer permitted to be built, as they obstruct the navigation. The stumps of one of these weirs

are visible at low tide near the end of Herne Bay Pier to the eastward. At one time they probably formed the principal means of catching fish. There is still an old one in use at Graveney, near Whitstable. It is built of oak



Graveney Weirs.

posts driven in about six feet apart, and standing a height varying from one foot to six feet above the ground at low tide, the spaces being filled in with transverse timber. The weir is shaped like the letter V, with the point out to sea, this pointed end being enclosed like a box, called the "pound"; the wide end is left open. As the tide recedes, fish in the weir are unable to escape. Large quantities of fish used to be wasted by want of attention in collecting them when caught, and weirs got into bad repute on that account, as they did also for another reason, as the following cutting from the *Kentish Gazette* of December 30th to January 3rd, 1786, serves to show:—

"Last Thursday night a boat, with four men in it, ran foul of a weir, near Whitstable, by which accident the boat was sunk and the men were all unfortunately drowned; this makes the number sixteen that have perished by this machine, which is of very little or no use to the owners, yet it continues to obstruct the navigation, and, as it were, to sport with the lives of our fellow-creatures."

Finds on the Flats.

Many are the odd and interesting things brought to light by the flatsman in the course of his search for oysters, mussels, cockles, whelks, and five-fingers. He has a fair knowledge now of the value of anything unusual, and preserves it, though in years gone by many archæological records must have been "shaded" through the portholes, unless an



Samian Ware from Pudding Pan Rock.

occasional perfect Samian pot were thought good enough to grow flowers in at home, or a precious basin were saved for the "Pudding Pie," elsewhere known as "Lent Pie," which the true Whitstable household indulges in once a year on Ash Wednesday. Many of these treasures have come from

Pudding Pan Rock, which is situate due north of Herne Bay Clock Tower, the edifice erected by Mrs. Thwaites, who was so mercilessly chaffed in the pages of *Punch* fifty years ago.



**The Clock Tower, Herne Bay.
A Landmark.**

This rock, which is never dry, is half a mile long and thirty perches wide. It is covered with loose stones of different sizes. It runs east and west, right in the passage from the buoy of the Spaniard to the Narrows or Woolpack, about three miles north-west from Reculvers, and about five miles north-east from Whitstable. There are said to be plenty of

oysters on it. Hasted especially describes a curious thin pan of red earth, covered with dusky brown glazing, made in the form of a sugar basin, with two handles and a foot, being five inches in diameter, its external circumference being ornamented with foliage. The most reasonable theory to account for the quantities of pottery found here is that some vessel freighted with these goods was once cast away on this rock, and her load dispersed from time to time by force of wind and wave. We cannot, however, ignore the possibility that when Samian ware was manufactured the Isle of Sheppey may have extended as far eastward as Pudding Pan Rock, of which there are slight indications, the tradition that the Goodwin Sands opposite Ramsgate were once habitable being some assistance in that speculation. The underwash of the sea is gradually sweeping away the unprotected earth cliffs of this part of the coast, a process which has been going on for thousands of years, and has in my own recollection toppled over many acres of land between Whitstable and Reculvers. Mammoth tusks are brought to light in this way, a pair about 8 feet long having been found at Swalecliffe only a few weeks ago. Specimens of submerged Samian ware have been often described, and Mr. Sibert Saunders' very fine collection is well known.

Among many other curious things that the dredge has found for the Whitstable Museum I may mention a few :—

A left-handed whelk shell, of which there is probably not one in ten thousand ; hermit crabs, which seek shelter in whelk shells because of their soft bodies and tails, and move into larger shells as they grow bigger ; a spider crab, with oyster spat on its back ; various beautiful specimens of the sea urchin, some like life, or with shells cleaned out or petrified ; teeth of gigantic sharks of the Eocene period ;



Whelks.
Right-handed. Left-handed.

fossilized fruit from the London clay ; numbers of clay pipes from about A.D. 1600, including one with an oyster grown into the bowl ; old keys ; the shell of a crab with sixteen oysters grown on it ; a Schiedam bottle of suggestively contraband appearance, with oysters adhering to it ; tiles from Archacon, in France, laid for spat, being coated with lime, so that the spat could be eased off with a knife, and allowed to look after themselves, to save them from being crowded out of life ; oyster shells covered with the work of the Ross worm, which produces its own lime as it proceeds, as a spider does its web ; a basket dredged up in the North Sea coated with spat ; various jars, stag horns, flint pistols covered with marine growth, a battle axe, an ox head, various red amphoræ, long tusks, and a leg bone, four feet in length.

**An Oyster
Mouse Trap.** There is in the museum a very original mouse-trap preserved in spirits of wine. It appears that some oysters, not being wanted at once, were placed in a crock in a back-yard, where two white mice found one of them gaping open. The mice inquisitively peeped in, which the oyster resented,

so tightly shutting his shells, he caught both mice by their heads, and in that position they were found and preserved by a well-known gentleman whose veracity is beyond doubt. These two mice were not as fortunate as the cat and two kittens shown in a picture painted by H. H. Cauldery, hung in the gallery of Nottingham Castle. Having climbed on to a table they are seen rapidly devouring a dozen oysters, evidently opened ready for their master's supper.

Pearls. It may be noted that the edible oyster does occasionally contain a small pearl, but of no particular commercial value. I hear that tiny pearls are quite commonly found in mussels. The same reason that causes an oyster to secrete a pearly substance round an irritating atom of grit, enables it to construct a pearly wall inside its shell to prevent further encroachment of any object which obtains firm lodgment round the internal edges.

Prices of Oysters. In his *History of Agriculture and Prices in England*, from 1259 to 1702, Professor Rogers gives carefully compiled tables of prices at which oysters were obtained in various parts of England, though I do not find Whitstable oysters mentioned in any way. Most of the prices in question were obtained from the roll of Thorney, in Sussex, and Sharpness, Sharpness then being a manor attached to Battle Abbey. In 1273 oysters appear to have been bought at the rate of $\frac{1}{2}$ d. per hundred, this being the earliest mention of price. In Kent, oysters seem to have been sold by the bushel, and the earliest reference to oysters from that county—probably from Whitstable or the near neighbourhood—is in 1388, when the price was 8d. per bushel; though in 1393 a lower price is recorded, viz.,



Packing.

6d. a bushel. In 1390 oysters were 8d. and mussels 5d. a bushel. Jumping to 1572 the price was 4d. per hundred, five hundred going to a bushel now-a-days. In 1595 some oysters are recorded as fetching 6d. a peck in London. It may be interesting to notice that in 1513 cockles fetched 8d. a bushel, so that in the sixteenth century the prices of oysters, mussels, and cockles were not vastly different.

In 1559 a hundred oysters changed hands at 9d., and for three years after the price varied from 8d. to 10d. a hundred. In 1614 Selsey oysters are specially mentioned at 1s. 4d. per hundred, and in the same year other oysters were only 5d. per hundred.

In 1638 a barrel of Mendham oysters cost 5s., and a purchase of 50 great oysters is recorded at 3s. per hundred, and in 1639 Hunston oysters cost 3s. 4d. per hundred. In

1653 one bushel of oysters changed hands for 2s. 4d., and from that date till 1680 prices ruled from that price to 3s. 6d. per bushel.

In London two quarts of oysters were sold at 2s. per quart in 1698.

The *Kentish Gazette* in its issue of 23rd January, 1823, mentioned that oysters fetched four guineas a bushel at Billingsgate. They were brought to London in waggons, as the frost was so severe vessels could not bring the oysters up by water. The wholesale price of "Royals" at Whitstable, in February, 1902, was 18s. per hundred tale, which was about doubled when they reached the consumer in London from the retail dealers. French, and other foreign oysters, are very much cheaper, even as low as 6d. a dozen, retail. Some readers may remember the comic song in which an economical lady is described as sitting in front of a mirror to eat half-a-dozen oysters, in order that she might think they were a dozen. With good oysters like "Royals" at four or five shillings a dozen, economy like that is not altogether surprising, though the price is not really high to a sincere lover of oysters to whose palate the real genuine article is a peculiarly gratifying sensation. The general public are not aware of the amount of labour and trouble devoted to providing them with a satisfactory oyster. Each one is examined, selected and cleaned from excrescences as carefully as if it were a blossom to be exhibited at a flower show, and those who have watched the process have gone away no longer wondering that the best English oyster cannot be sold in London so cheaply as some of the foreigners.

Professor Rogers, in Vol. IV. of his interesting work, says : "There are fifteen entries of oysters, generally by the

hundred or thousand, once by a measure which I cannot interpret, 'the Waste.' This entry is in 1482, and he gives it as "2½ waste, 4d." Personally, I think there can be no doubt this word should be read as "Wash," that being a measure in everyday use in Whitstable even now.

It would be interesting to know what was the probable value of the half-penny in 1273, when that was the price of one hundred oysters. It will be remembered that the only coins of the Kings, down to Edward III., were silver pennies. There were imaginary coins (money of account), just as we might speak of a pound without reference to the sovereign, and in Saxon and early English times, the Scilling or Shilling was such an imaginary coin.

William I. settled the Saxon Shilling at four pennies, but also established a Norman Shilling at twelve pennies.

Yet no actual coin representing a shilling appeared till the reign of Henry VII. The first English pennies weighed 22½ grains troy of silver. Under Edward III. the same coins weighed 18 grains, under Edward IV. 12 grains, and under Edward VI. 8 grains. Half-pennies were formed by cutting the penny into two pieces, the penny being marked with a cross, possibly as a guide for division into two or four parts. Curiosity is aroused by hearing that the price of oysters in 1273 was a half-penny per hundred, but it is extremely difficult to get at the real relationship of values then and now. Adam Smith considered the prices of wheat more suggestive of relative value than any other commodity. In that same year wheat cost an average of 5s. per quarter of 8 bushels, eggs were 3½d. the great hundred, which was 120, and butter was 6d. a gallon. English wheat is now 28s. to 30s. per quarter, and within

recollection was at least double that price, so that a consideration of the cost of wheat does not help us very much. At the beginning of the 14th century sheep cost 1s. each, and meat one farthing a pound, and butter and cheese were at least double the price of meat.

In further brief illustration of prices at that period, as bearing on the price of oysters, there is record of a man having to carry manure at a payment of $\frac{1}{2}$ d. a day, or give 1 $\frac{1}{2}$ d. in lieu of the service, and in 1334 another individual had to furnish a man, cart, and two horses for the same agricultural purpose, for which he received a farthing worth of bread for the first day, and on the second day a repast worth three half-pence. Now-a-days, a contractor providing a man, cart and horse, is paid from seven to ten shillings a day. It may be possible to deduce a comparative



Herne Mill. A Landmark.



Borstal Mill. A Landmark.



Carrying Oysters up the beach.

relation of value from these notes, but in any case it would seem clear that oysters, like fish, were a luxury, especially to the poor, to whom the whale and porpoise are known to have been choice dishes, the flesh of the latter, served with bread crumbs and vinegar, having been consumed by the nobles of England in the days of Queen Elizabeth.

The price of "Royals" and other oysters vary from time to time, but the men who live by their cultivation go on uncomplainingly whatever the state of their special trade may be, and it certainly is not always good. Strikes are unknown to them, and all they object to is interference or criticism by people who are not in a position to understand the difficulties under which they work, though they welcome those who come to learn what they can of their occupation of oyster culture.

By innumerable indications at sea, and marks on land, by the experience gained by years of apprenticeship and manly toil, following in the footsteps of ancestors during centuries past, the oyster fishermen attain a perfect acquaintance with the ground or flats hidden beneath the waves of the North Sea. They provide us with a table luxury and themselves with a livelihood, and enjoy in fine weather a pleasant occupation, which in winter becomes both dangerous and hard, requiring all the pluck and endurance with which the Oyster Dredgers of Whitstable are so justly credited.



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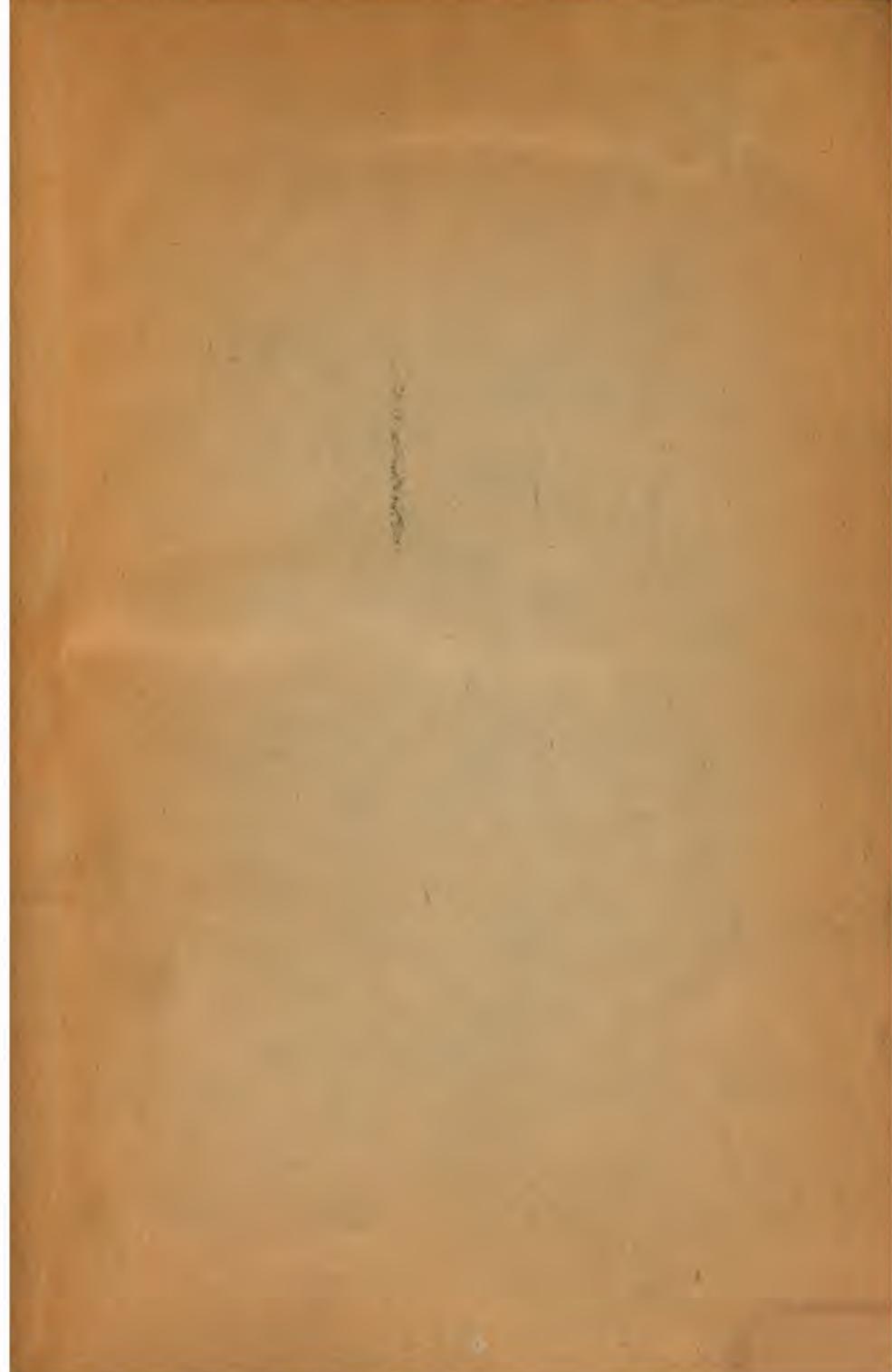
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